MUSHFIQUL ANWAR SIRAJI
Monash University, Malaysia
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Experience

PhD Research Fellow (2019 – Current)
Jeffrey Cheah School of Medicine and Health Science, Monash University, Malaysia.

I play a critical role in designing experiments and analysing data at the Monash University Malaysia Intelligent Light Lab. My responsibilities include:

- Designing survey to explore light-exposure-related behaviours among Malaysian residents. I have constructed several R language-based models to understand the interplay of human physiology, psychology, and electric light exposure.
- Designing experiments to quantify the influence of electric light on human physiology and behaviour. I have designed a ten-hour experimental protocol that compared students' performance under two blue-enriched light solutions differing in illuminance.
- Developing tools to understand the potential influence of behaviour on light exposure. As a part of an international project, I have contributed to developing a novel tool to capture different light-exposure-related behaviour. I performed the psychometric analysis to validate the tool using classical test theory and item response theory.
- Developing computer-based cognitive tests. I have developed computer-based Psychomotor Vigilance Test, N-Back, and Motor Sequence Task using the PsychoPy platform.
- Developing R-language-based application to run psychometric analysis. I have developed a shiny application to facilitate exploratory factor analysis.

Educational Credentials

Doctor of Philosophy (July 2019 – Feb 2023), Jeffrey Cheah School of Medicine and Health Science, Monash University, Malaysia.
Dissertation Title: A Field Study on Classroom Lighting and Its Visual and Non-visual Effects on Students.
Master of Science (July 2014 – June 2015; Degree Received in September 2017), Department of Psychology, University of Dhaka.
Thesis Title: Adaptation of Rotter's Internal-External Scale in Bangla.
Bachelor of Science (July 2010 – June 2014; Degree Received in August 2015), Department of Psychology, University of Dhaka.
Project: Perception without Awareness and Memory Span Limit.

Awards

- Student Travel Award 2022, Society for Light Treatment and Biological Rhythms (SLTBR).
- Best Mentor Award 2022, Bangladesh Psychometric Society (BPS).

Publications

Published Works

- **Siraji, MA.,** Kalavally, V., Schaefer, A., & Haque, S. (2022). Effects of Daytime Electric Light Exposure on Human Alertness and Higher Cognitive Functions: A Systematic Review. Frontiers in Psychology, 12(6079). https://doi.org/10.3389/fpsyg.2021.765750.*
- Munni SI, **Siraji MA.**, & Borak Z. (2022) Cultural Adaptation and Psychometric Evaluation of the Normative Beliefs about Aggression Scale in Bangla. Dhaka University Journal of Biological Sciences (accepted).

Manuscripts Under Preparation

- **Siraji, MA.,** Lazar, R., van Duijnhoven, J., Schlangen, L., Haque, S., Kalavally, V., Vetter, C., Glickman, G., Smolders, K., & Spitschan, M. (2022). Light Exposure Behaviour Assessment (LEBA): Development of A Novel Instrument to Capture Light Exposure-related Behaviours. (Manuscript Under Preparation).*
- **Siraji MA.,** Haque S. (2022). Psychometric Evaluation of the Bangla-translated Rotter's Internal-External Scale Through Classical Test Theory and Item Response Theory. (Manuscript Under Preparation).*

Conference Presentations

- A Novel Self-reported Instrument to Capture Light Exposure-related Behaviour.
  Society for Light Treatment and Biological Rhythms (SLTBR) 2022.
- Light Exposure Behaviour Assessment (LEBA): Development of a Novel Instrument to Capture Light Exposure-related Behaviours.
  International Commission on Illumination (CIE), Australia: Lighting Research Conference, 2022.
- Influence of Daytime Short-wavelength Dominant Electric Light Exposure on Human Alertness and higher Cognitive Functions: A CIE S026-Based Pilot Study.
  International Commission on Illumination (CIE), Australia: Lighting Research Conference, 2022.
- A Study on Classroom Lighting and its Effect on Student Alertness and Work Performance.
  TransformED: Learning and Teaching Showcase, Monash University, Malaysia, 2022.

Translation Work

- Weinzaepflen, C., Spitschan, M., & **Siraji, M.A**. (2021). **Enlighten Your Clock: How Your Body Tells Time (Bangla)**. (C. Weinzaepflen, Illustration; M.A. Siraji, Translation). DOI: 10.17605/OSF.IO/AVJ49.

Society Affiliation

- Society for Light Treatment and Biological Rhythms (SLTBR), Member (2021 - current).
- Bangladesh Psychometric Society, Executive Member (2021 - current).

Skills

- Test Development
- Psychometry
- R Language-based Statistical Analysis
- Rmarkdown & Reproducible Research
- Classical Test Theory & Item Response Theory-based psychometry
- Data Visualization
- Structural Equation Modelling
- Exploratory and Confirmatory Factor Analysis
- SPSS
- Office365
- PsychoPy

References

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  Associate Professor
  School of Engineering
  Monash University, Malaysia
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- Alexandre Schaefer
  Professor
  Department of Psychology.
  Sunway University
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